

FILE EBARA.DOC

\*\*\*ENGLISH LANGUAGE ABSTRACT FOR JP 8284841 (EBARA)\*\*\*

File 351:Derwent WPI 1963-2001/UD,UM &UP=200207

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\*File 351: Price changes as of 1/1/02. Please see HELP RATES 351.  
ore updates in 2002. Please see HELP NEWS 351.

Subaccount is set to DUMMER13.001APC

?ss ax=97-018727

S2 1 AX=97-018727

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DIALOG(R)File 351:Derwent WPI

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011040803 \*\*Image available\*\*

WPI Acc No: \*1997-018727\*/199702

Pumping plant connected to water supply mains - derives total head and  
suction pressure from detected delivery pressure, power consumption and  
speed and adjusts motor speed through inverter

Patent Assignee: EBARA CORP (EBAR )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 8284841	A	19961029	JP 95108974	A	19950410	199702 B

Priority Applications (No Type Date): JP 95108974 A 19950410

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8284841	A		6	F04B-049/06	

Abstract (Basic): JP 8284841 A

The pumping plant consists of a motor (11) and a pump (10) connected in a water supply main. A delivery pressure detector detects the delivery pressure of the pump and signals to a controller (22). Simultaneously a power consumption detector and a rotating speed detector detects the power consumption and speed of the motor. A total head pressure of the pump is calculated from stored data relating to the power consumption and speed with the total head pressure.

The suction pressure is calculated from the total head pressure and delivery pressure values. The controller adjusts the motor speed through an inverter (21) to provide the fixed delivery pressure under varying suction pressure conditions.

ADVANTAGE - Does not use pressure transmitter on suction side. Protects delivery pressure. Saves wiring and other components on suction side. Offers compact structure for pumping plant.

Dwg.1/5

Derwent Class: Q56; X25

International Patent Class (Main): F04B-049/06

International Patent Class (Additional): F04B-023/00; F04D-015/02

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Sub account: DUMMER13.001APC

\$11.57 Estimated total session cost 0.532 DialUnits

File 347:JAPIO OCT 1976-2001/Sep(UPDATED 020102)

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\*File 347: JAPIO data problems with year 2000 records are now fixed.  
Alerts have been run. See HELP NEWS 347 for details.

Set	Items	Description
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?s pn=jp	8284841	
S1	1	PN=JP 8284841

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DIALOG(R)File 347:JAPIO  
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05329341 \*\*Image available\*\*  
PUMP DEVICE

PUB. NO.: 08-284841 [\*JP 8284841\* A]  
PUBLISHED: October 29, 1996 (19961029)  
INVENTOR(s): TAKADA TSUTOMU  
APPLICANT(s): EBARA CORP [000023] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 07-108974 [JP 95108974]  
FILED: April 10, 1995 (19950410)

#### ABSTRACT

PURPOSE: To enable measurement of suction pressure in a pump without installing a pressure detector at an inlet side of the pump as well as make the compactification of a device structure achievable by calculating the suction pressure from those of discharge pressure, power consumption and rotational frequency of this pump.

CONSTITUTION: A pump 10 is variably controlled by an inverter 21 and a motor 11, and it is variably operated at an optional speed. In addition, it is provided with a pressure transmitter 17 at the discharge side and controlled so as to make pressure at the pump discharge side become constant by a signal of a control unit 22. In addition, it is also provided with a suction side pressure tank 14, a discharge side pressure tank 15, a check valve 18 or the like, through which an output current of the inverter 21 is detected by a current converter 23 and fed to the control unit 22 which is equipped with a calculating means of power consumption, calculating this power consumption of the pump 10 from an output voltage and an output current of the inverter 21. Rotational frequency of the pump 10 is calculated from the frequency of an ac current to be fed to the motor by the inverter 21, while discharge pressure of the pump 10 is obtainable from the discharge side pressure transmitter 17.

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Sub account: DUMMER13.001APC  
\$16.76 Estimated total session cost 0.841 DialUnits